B14 cont.

formed on a surface between the portion and said driving wires; and

a periodical projection/recess structure formed on a surface between said first wire and the portion.

REMARKS

Claims 1-137 are pending for examination. Claims 40, 55-66, 75-78, 95-98, 112, and 128 have been amended, and Claims 130-137 have been added herein.[1]

The specification has been amended to make grammatical and other minor changes. No new matter has been added.

The amendments to Claims 40, 55-66, 75-78, 95-98, 112, and 128 have not been made for purposes related to patentability. No change in scope is either intended or believed effected by those amendments.

Favorable consideration of the pending claims and early passage to issue of the present application are respectfully requested.

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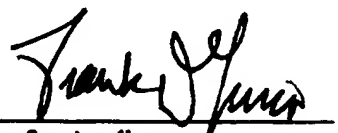
[1] Claim 40 is indicated above as having been "Twice Amended" since that claim previously was amended in Examiner's Amendment attached to the Notice of Allowance dated October 1, 2002, and has been amended again herein.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should be directed to our address listed below.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE TO SPECIFICATION

The paragraph appearing at page 2, lines 7-13 has been amended as follows:

This high voltage is about 15kV to 25 kV for CRT, and about 10 kV to 15 kV for a display apparatus using electron-emitting devices. [From] For this reason, techniques have been proposed which use an electrical earth connection structure and an electrical insulating structure near the phosphor applied with a high voltage.

The paragraph appearing from page 16, line 22 to page 17, line 9 has been amended as follows:

It is preferable to adopt the structure that the electron-emitting apparatus further comprises a second wire different from the acceleration electrode disposed on an acceleration electrode substrate on which the acceleration electrode is formed, wherein the conductive contact member is electrically connected to both [the] lead portions of the first and second wires. It is preferable to adopt the structure that at least a portion of the conductive contact member is squeezed between the electron source substrate and the acceleration electrode substrate, and the conductive contact member is in contact with both [the] lead portions of the first and second wires on the electron source substrate and on the acceleration electrode substrate.

The paragraph appearing at page 18, lines 6-26 has been amended as follows:

In supplying the first or second wire with a predetermined potential, particularly a ground potential, it is preferable to adopt the structure that the predetermined potential is supplied from a cover of the electron-emitting apparatus. The cover is made conductive by using metal or covering it with a conductive film. It is preferable to adopt the structure that the conductive contact member is electrically connected to the cover by fixing the cover to the conductive contact member (with screws, or pressure), and the predetermined potential such as a ground potential is supplied via the cover to the conductive contact member. The material of the cover is preferably aluminum or magnesium. It is preferable to form the cover by extruding. A conductive cover formed by coating a conductive layer on resin may also be used. The conductive layer preferably contains at least one of copper, nickel and carbon. [Ii] It is preferable to adopt the structure that the conductive cover is connected to the common earth line of the power source of the electron-emitting apparatus.

The paragraph appearing from page 19, line 24 to page 20, line 8 has been amended as follows:

It is preferable to adopt the structure that an acceleration electrode substrate on which the acceleration electrode is formed constitutes a portion of a vacuum container,

and the acceleration electrode has a conductive layer formed outside of the vacuum container. The conductive layer may be formed by attaching a film-like member to a substrate. This conductive layer is transparent if it is used with an image-forming apparatus and an image is viewed from the conductive layer side. It is preferable to use ITO (indium tin oxide) as the material of the conductive layer.

The paragraph appearing at page 57, lines 15-24 has been amended as follows:

In Figs. 11 and 12, the reference numeral 1100 represents a contact plate which squeezes RP 1 constituting the vacuum container of the image display panel using [electron-demitting] electron-emitting devices and is electrically connected to the independent wire lead-in portion 108 on RP 1. The contact plate is made of material having conductivity and resilience and formed by bending a thin plate (thickness of 0.2 mm to 0.5 mm) such as stainless steel and phosphor bronze subjected to a plating process (anticorrosion process).

The paragraph appearing from page 67, line 22 to page 68, line 25 has been amended as follows:

In this embodiment, as a thin flat image display panel, a display using electron-emitting devices is used. Similar to the above-described embodiments, in the high

potential supply path from the high voltage source to the acceleration electrode of the face plate in the vacuum container, a dielectric breakdown proof structure using a high resistance film formed around the lead wire in the vacuum container on the RP side, as well as the ring shape independent wire (first wire) at the earth potential is provided. In this embodiment, another independent wire (second wire) spaced from the acceleration electrode is formed around the image forming unit (acceleration electrode) of FP in the vacuum container. The independent wire (second wire) at the earth potential is disposed at a constant space from the generally rectangular acceleration electrode and has a shape matching the generally rectangular acceleration electrode. In order to reliably [defining] define the earth potential of both [the] independent wires (first and second wires), the RP independent wire is connected to the earth lines of FPC's connected to the earth potential of the driver circuits, and further a conductive contact member in contact with the inner wall of the front frame is used. The conductive contact member is in contact with the lead portions of both the RP and FP independent wires extended outside of the vacuum container to supply the earth potential, and is also electrically connected to the front frame connected to an earth potential of the power source unit. The conductive contact member is inserted and fixed in a space between FP and RP without using any fixing means such as a screw.

The paragraph appearing at page 73, lines 5-18 has been amended as follows:

In RP 1, the independent wire 105 is connected to the earth lines of the X- and Y-direction FPC's 401-X and 401-Y connected to the earth patterns of the X- and Y-direction driver circuits. The lead-in portion of the independent wire 105 is exposed to the outside of the vacuum container in RP1, and in FP 11 the FP independent wire lead-in portion 50b of the independent wire 50a is exposed to the outside of the vacuum container. Both [the] lead-in portions of the independent wires are made in contact with the contact member 51 connected to the front frame 96 connected to the earth potential of the power source unit. It is therefore possible to reliably define the earth potential of the independent wires of FP 11 and RP 1.

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO THE CLAIMS

40. (Twice Amended) An electron-emitting apparatus comprising:

electron-emitting devices;

driving wires connected to said electron-emitting devices;

an electron source substrate on which said electron-emitting devices and said driving wires are arranged;

an acceleration electrode mounted at a position facing said electron source substrate, said acceleration electrode being applied with an acceleration potential for accelerating electrons emitted from said electron-emitting devices;

a potential supply path for supplying the acceleration potential to said acceleration electrode, said potential supply path being introduced by passing through said electron source substrate;

a first wire provided separately from said driving wires and formed on a surface between [the intermediate area] a passing portion and said driving wires;

a sealing structure integrated with said potential supply path and hermetically mounted in a hole formed through said electron source substrate; and

a projection/recess structure formed on a surface between said sealing structure and said first wire.

55. (Amended) An electron-emitting apparatus according to claim 51,

wherein the conductive contact member includes opposing portions, a distance between the opposing portions is longer than a thickness of said electron source substrate and a distance between opposing portions in contact with the lead portion of said first wire is shorter than [he] the thickness of said electron source substrate, when the conductive contact member does not squeeze said electron source substrate.

56. (Amended) An electron-emitting apparatus according to claim 52, wherein the conductive contact member includes opposing portions, a distance between the opposing portions is longer than a thickness of said electron source substrate and a distance between opposing portions in contact with the lead portion of said first wire is shorter than [he] the thickness of said electron source substrate, when the conductive contact member does not squeeze said electron source substrate.

57. (Amended) An electron-emitting apparatus according to claim 53, wherein the conductive contact member includes opposing portions, a distance between the opposing portions is longer than a thickness of said electron source substrate and a distance between opposing portions in contact with the lead portion of said first wire is shorter than [he] the thickness of said electron source substrate, when the conductive contact member does not squeeze said electron source substrate.

58. (Amended) An electron-emitting apparatus according to claim 54,

wherein the conductive contact member includes opposing portions, a distance between the opposing portions is longer than a thickness of said electron source substrate and a distance between opposing portions in contact with the lead portion of said first wire is shorter than [he] the thickness of said electron source substrate, when the conductive contact member does not squeeze said electron source substrate.

59. (Amended) An electron-emitting apparatus according to claim 51, further comprising a second wire different from said acceleration electrode disposed on an acceleration electrode substrate on which said acceleration electrode is formed, wherein said conductive contact member is electrically connected to both [the] lead portions of said first and second wires.

60. (Amended) An electron-emitting apparatus according to claim 44, further comprising a second wire different from said acceleration electrode disposed on an acceleration electrode substrate on which said acceleration electrode is formed, wherein said conductive contact member is electrically connected to both [the] lead portions of said first and second wires.

61. (Amended) An electron-emitting apparatus according to claim 45, further comprising a second wire different from said acceleration electrode disposed on an acceleration electrode substrate on which said acceleration electrode is formed, wherein said

conductive contact member is electrically connected to both [the] lead portions of said first and second wires.

62. (Amended) An electron-emitting apparatus according to claim 46, further comprising a second wire different from said acceleration electrode disposed on an acceleration electrode substrate on which said acceleration electrode is formed, wherein said conductive contact member is electrically connected to both [the] lead portions of said first and second wires.

63. (Amended) An electron-emitting apparatus according to claim 59, wherein at least a portion of the conductive contact member is squeezed between said electron source substrate and the acceleration electrode substrate, and the conductive contact member is in contact with both [the] lead portions of said first and second wires on said electron source substrate and on the acceleration electrode substrate.

64. (Amended) An electron-emitting apparatus according to claim 60, wherein at least a portion of the conductive contact member is squeezed between said electron source substrate and the acceleration electrode substrate, and the conductive contact member is in contact with both [the] lead portions of said first and second wires on said electron source substrate and on the acceleration electrode substrate.

65. (Amended) An electron-emitting apparatus according to claim 61, wherein at least a portion of the conductive contact member is squeezed between said electron source substrate and the acceleration electrode substrate, and the conductive contact member is in contact with both [the] lead portions of said first and second wires on said electron source substrate and on the acceleration electrode substrate.

66. (Amended) An electron-emitting apparatus according to claim 62, wherein at least a portion of the conductive contact member is squeezed between said electron source substrate and the acceleration electrode substrate, and the conductive contact member is in contact with both [the] lead portions of said first and second wires on said electron source substrate and on the acceleration electrode substrate.

75. (Amended) An electron-emitting apparatus according to claim 43, wherein the conductive contact member contacts a lead portion extended on a surface which is the same as the surface on which said first line is formed.

76. (Amended) [n] An electron-emitting apparatus according to [any] claim 44, wherein the conductive contact member contacts a lead portion extended on a surface which is the same as the surface on which said first line is formed.

77. (Amended) An electron-emitting apparatus according to claim 45,

wherein the conductive contact member contacts a lead portion extended on a surface which is the same as the surface on which said first line is formed.

78. (Amended) An electron-emitting apparatus according to claim 46, wherein the conductive contact member contacts a lead portion extended on a surface which is the same as the surface on which said first line is formed.

95. (Amended) An electron-emitting apparatus according to claim 1, wherein an acceleration electrode substrate on which said acceleration electrode is formed constitutes a portion of a vacuum container, and the acceleration electrode has a conductive layer formed outside of the vacuum container.

96. (Amended) An electron-emitting apparatus according to claim 4, wherein an acceleration electrode substrate on which said acceleration electrode is formed constitutes a portion of a vacuum container, and the acceleration electrode has a conductive layer formed outside of the vacuum container.

97. (Amended) An electron-emitting apparatus according to claim 39, wherein an acceleration electrode substrate on which said acceleration electrode is formed constitutes a portion of a vacuum container, and the acceleration electrode has a conductive layer formed outside of the vacuum container.

98. (Amended) An electron-emitting apparatus according to claim 40, wherein an acceleration electrode substrate on which said acceleration electrode is formed constitutes a portion of a vacuum container, and the acceleration electrode has a conductive layer formed outside of the vacuum container.

112. (Amended) An electron-emitting apparatus according to claim 111, wherein the conductive contact member is in contact with both [the] lead portions of said first and second wires to apply a predetermined common potential to both [the] lead portions.

128. (Amended) An image-forming apparatus comprising an electron-emitting apparatus recited in claim 40 [nd] and a phosphor which emits light upon incidence of electrons accelerated by the acceleration potential.